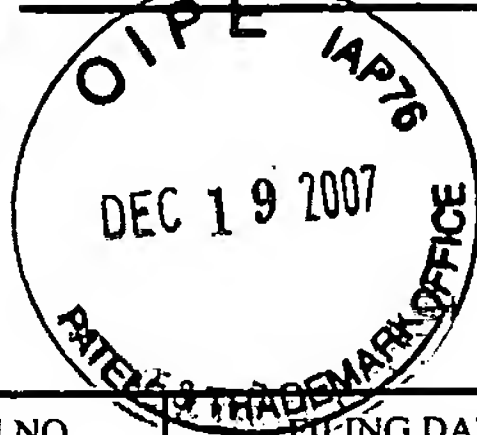




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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,723	03/31/2004	Yoram Ofek	OFE 1855	9861
Yoram Ofek Suite 1921 2600 Netherland Avenue Riverdale, NY 10463			EXAMINER TRINH, TAN H	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 12/12/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/814,723	<b>Applicant(s)</b> OFEK ET AL.	
	<b>Examiner</b> TAN TRINH	<b>Art Unit</b> 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-63 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Group I (Claims 1-7), drawn to a plurality of directional antenna sectors each having a respective three-dimensional region for transmitting and receiving electromagnetic signals; a plurality of access control units each having a baseband processor, classified in class 455, subclass 25 and 63.4.
  - II. Group II (Claims 8-11), drawn to a first device comprising at least one receiving controller; at least one transmitting controller; and a plurality of directional antenna sectors each having a respective three-dimensional region for transmitting and receiving electromagnetic signals; wherein each of the directional antenna sectors transmits electromagnetic signals in a predefined region responsive to coupling to a selected one of said at least one transmitting controller of the first device; wherein the selected one of said at least one transmitting controller of the first device is selectively coupled to at least one of the directional antenna sectors in order to transmit a first signal to a second device via a selected one of the wireless channels, classified in class 455, subclass 562.1.
  - III. Group III (Claims 12-20 and 38-46), drawn to An antenna system for transmitting and receiving a plurality of data packets, the system comprising: an antenna control unit; a plurality of directional antenna sectors each associated with a respective region of space for transmitting and receiving electromagnetic signals; at least one receiving controller; wherein each said directional antenna sector is at

least one of the following: a flat panel, a planar, a parabolic dish, a slotted, a micro-strip, omni and a Yagi;, classified in class 343, subclass 757 and 702.

- IV. Group IV (Claims 21-37 and 47-63), drawn to An antenna apparatus comprising: a self-contained antenna structure comprising: a plurality of flat panel directional antennas, wherein each of said plurality of flat panel directional antennas is comprised of a plurality of patches arranged in a pattern; a support structure for attaching the plurality of said flat panel directional antennas, classified in class 370, subclass 352 and 353.

The inventions are distinct, each from the other because of the following reasons:

Inventions I, II, III and IV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention IV has separate utility such as a self-contained antenna structure. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, Group IV is not required for Group III and so on, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Conclusion***

**2. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
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**or faxed to:**

**(571) 273-8300, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314).*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

Application/Control Number:  
10/814,723  
Art Unit: 2618

Page 5

The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

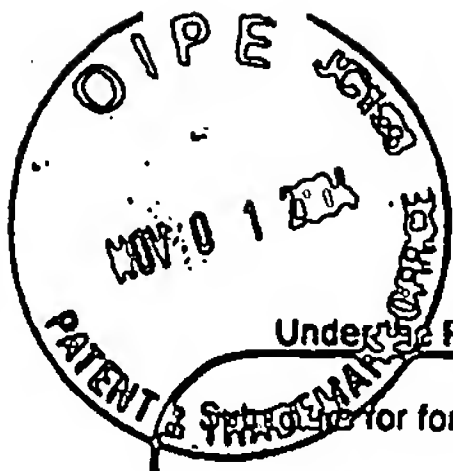
4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh  
Division 2618  
December 6, 2007

**PATENT EXAMINER:**  
**TRINH, TAN**







PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0851-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	10/814,723		
		Filing Date	March 31, 2004		
		First Named Inventor	OFEK, Yoram		
		Art Unit	2618		
		Examiner Name	TRINH, TAN		
Sheet	1	of	2	Attorney Docket Number	OFE 1855

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/TT/		T.S. RAPPAPORT, "Wireless Communications: Principles & Practice," 1999, Prentice Hall, Upper Saddle River, New Jersey, USA.	
/TT/		J. C. LIBERTI AND T. S. RAPPAPORT, "Smart Antennas for Wireless Communications: IS-95 and Third-Generation CDMA," 1999, ISBN: 0-13-719287-8, Prentice Hall, New Jersey, USA	
		<del>IEEE 802.11 wireless LAN (local area network)</del>	
/TT/		BENJAMIN RULF, GREGORY A. ROBERTSHAW (CONTRIBUTOR), "Understanding Antennas for Radar Communications and Avionics (Van Nostrand Reinhold Electrical/Computer Science and Engineering Series)," May 1987, 335 pages, ISBN: 0442277725, Kluwer Academic Publishers	
/TT/		LAL C. GODARA, "Applications of Antenna Arrays to Mobile Communications, Part I: Performance Improvement, Feasibility, and System Considerations," JULY 1997, pp. 1031-1060, PROCEEDINGS OF THE IEEE, VOL. 85, NO. 7,	
/TT/		LAL C. GODARA, "Applications of Antenna Arrays to Mobile Communications, Part II: Beam-Forming and Direction-of-Arrival Considerations," AUGUST 1997, pp. 1195-1245, PROCEEDINGS OF THE IEEE, VOL. 85, NO. 8,	
/TT/		MARTIN COOPER AND MARC GOLDBURG, "Intelligent Antennas: Spatial Division Multiple Access," 1996, pp. 999-1002, 1996 ANNUAL REVIEW OF COMMUNICATIONS,	
/TT/		M. COOPER, "Antennas get Smart," July 2003, pp. 48-55, Scientific American,	
/TT/		BERTONI, H.L., "Radio Propagation for Modern Wireless Systems", 2000, ISBN 0130263737, Prentice Hall	
/TT/		IEEE Std 802.16 -2001, Part 16: Air Interface for Fixed Broadband Wireless Access Systems	
/TT/		IEEE Std 802.15.1-2002, Part 15.1: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Wireless Personal Area Networks (WPANs)	

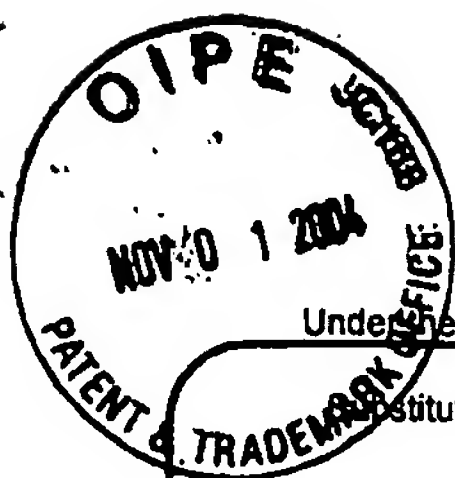
Examiner Signature	/Tan Trinh/	Date Considered	08/22/2007
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

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Institute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2

of 2

**Complete if Known**

Application Number	10/814,723
Filing Date	3/31/2004
First Named Inventor	OFEK, Yoram
Art Unit	2618
Examiner Name	TRINH, TAN
Attorney Docket Number	OFE 1855

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
/TT/		US- 6,486,832	11/26/2002	Abramov, et al.	
/TT/		US- 6,278,405	08/21/2001	Ha, et al.	
/TT/		US- 6,070,071	05/30/2000	Chavez, et al.	
/TT/		US- 6,078,823	06/20/2000	Chavez, et al.	
/TT/		US- 6,449,469	09/10/2002	Miyahara	
/TT/		US- 5,969,689	10/19/1999	Martek, et al.	
/TT/		US- 6,683,567 B2	01/27/2004	De Champlain, et al.	
/TT/		US- 6,426,814 B1	07/30/2002	Berger, et al.	
/TT/		US- 6,243,427 B1	06/05/2001	Stockton, et al.	
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**FOREIGN PATENT DOCUMENTS**

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

Examiner  
Signature

/Tan Trinh/

Date  
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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